

VECTOR NETWORK ANALYZER – TOTAL COST OF OWNERSHIP

Essential cost consideration



Vector network analyzer affiliation costing

When investing in a vector network analyzer (VNA) – from sophisticated high-end millimeterwave VNAs to handheld VNAs – the costs are not just limited to the initial purchase cost, also known as the acquisition cost. The total cost of ownership (TCO) covers the entire product lifecycle.

Over the years, the affiliation costs are critical components regardless of the initial investment cost. Possible affiliation components in a TCO calculation include costs for upgrades, calibration, power consumption, downtime and maintenance.

Minimal TCO will help to keep operating costs low, thus optimizing company profit.

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General RF lab measurements	Production
Education and training	Service and maintenance

Cost components

Direct	Indirect
 ▶ Acquisition cost ▶ Future-proof upgradeability ▶ Training costs ▶ Calibration costs ▶ Support costs ▶ Downtime – failure rate (reliability) 	 ▶ Preventive maintenance costs ▶ Repair costs ▶ Repair time (turnaround time) ▶ Power consumption (electricity costs) ▶ Disposal costs ▶ Others (example: employee's health and wellbeing due to discomfort when using the equipment)

Your benefit	Features
Better control over operating costs	Aftersales service packages available such as warranty extensions and calibration coverage
Better value for short and long-term testing costs	 Upgrades for future-proof capabilities: software and hardware options One-stop shop solution provider – offering a vast variety of high-quality VNA accessories for your testing needs (calibration kit/unit, cables and torque wrench, etc.) Low preventive maintenance costs
Conducive working environment and increased energy efficiency (lowering operating costs) – especially critical in production environ- ments where many VNAs are in operation	► Low-noise electronic design ensures minimal operating noise Low power consumption ¹

¹ Example: R&S®ZNA requires only 300 W for 2-port model and 350 W for 4-port model, whereas the competitor's device typically requires 40% more power to operate.

Future-proof – upgrading feasibility and flexibility

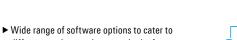


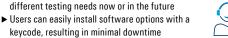
► Critical patches and firmware updates available free of charge for the lifetime of the instrument



- ► Handle various challenging measurements up to 1.1 THz (R&S®ZNA67EXT)
- ► Enjoy easy handling and measurement setup
- ▶ Up to four converters or receivers





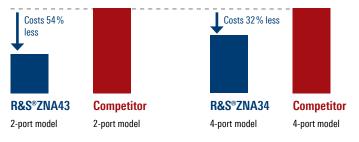




- ► Versatile hardware options
 - Two internal receiver local oscillator sources
 - Four internal sources (phase coherent)
- ► Installed by qualified service engineer
- ► Full 24/7 instrument support service from the experienced and well-trained Rohde & Schwarz global customer support team
- ► At no cost, thereby avoiding budget issues

Preventive maintenance costs

Service pricing for 2-year warranty extension



The prices for the 2-year warranty extension are significantly lower for the R&S®ZNA than for the competitor's devices:

- ► 2-port model costs 54% less
- ► 4-port model costs 32 % less

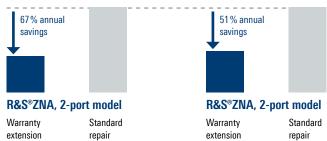


R&S®ZNA vector

network analyzer.

4-port model

Standard repair vs. warranty extension for R&S®ZNA



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Annual savings when purchasing a warranty extension for the R&S®ZNA compared to the standard repair

- ▶ 2-port model: 67 %
- ▶ 4-port model: 51%



After-service warranty

For standard repair cases, Rohde & Schwarz confidently provides a 12-month extended warranty on the complete instrument, not just the repair. This ensures no unexpected costs during this warranty period.



Low device noise and efficient power consumption

The R&S®ZNA has minimal operating noise, which help you master the most challenging measurement tasks with maximum comfort. Low power consumption boosts your bottom line and improves energy efficiency.

Device noise level



Competitor

- ► Low noise pollution ► High noise pollution
- ► Acoustic noise as low as 42 dB(A)

R&S®ZNA



R&S®ZNA67

Competitor

► 2-port model: 300 W

kWh

Power consumption

- ▶ 2-port model: 575 W ▶ 4-port model: 350 W
 - ► 4-port model: 575 W

Highlights

- ► Flexibility to extend device capabilities for future tasks
- ► Cost-saving preventive maintenance packages
- ► Energy-saving design
- ► Long after-service warranty period